

U.S. Patent Application Serial No. 10/721,069
Amendment filed May 1, 2006
Reply to OA dated September 7, 2005

AMENDMENTS TO THE SPECIFICATION:

Amend the specification as follows:

Amend paragraph [0064], beginning at page 25, as follows:

[0064] The toner of the present invention may be obtained by mixing a colored polymer particle, a external additive, and another optional particle, with a high speed mixer such as a ~~Henschel mixer~~ HENSCHEL MIXER.

Amend paragraph [0078], beginning at page 29, as follows:

[0078] 100 parts of thus obtained colored polymer, 1.0 part cube shaped calcium carbonate with volume average particle diameter of 0.3 μm (trade name: CUBE-03BHS, Dv/Dp:1.26, density: 2.6 g/mL, product of Maruo Calcium Co., Ltd.), 0.5 part of fine silica particle with volume average particle diameter of 12 nm (trade name: RX-200, product of Nippon Aerosil Co., Ltd.) and 2.0 parts of fine silica particle with volume average particle diameter of 40 nm (trade name: RX-50, product of Nippon Aerosil Co., Ltd.) were mixed at 1,400 rpm for 10 minutes with a ~~Henschel mixer~~ HENSCHEL MIXER to obtain a toner. The printing properties and other properties of the obtained toner were evaluated. The results are shown in Table 1.

Amend paragraph [0081], beginning at page 30, as follows:

[0081] Comparative Example 2

U.S. Patent Application Serial No. 10/721,069
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The following materials were mixed and stirred with a Sand Stirrer to obtain a polymerizable composition:

100 parts of styrene;

35 parts of n-butyl methacrylate;

5 parts of methacrylic acid;

0.5 part of 2,2'-azobis(2,4-dimethylvaleronitrile);

3 parts of low molecular weight polypropylene (trade name: Viscol 605P, Sanyo Chemical Industries, Ltd.);

8 parts of carbon black (trade name: MA#8, product of Mitsubishi Chemical Corporation);
and

3 parts of chromium complex salt dye (trade name: Aizen Spilon Black TRH, product of Hodogaya Chemical Co., Ltd.).

Then the resultant composition was subjected to polymerization reaction at 60 °C for 6 hours, in a aqueous solution of 6 weight/volume % gum arabic, with stirring at 4,000 rpm by means of a mixer (TK Auto Homo Mixer, product of Tokushu Kika Kogyo Co., Ltd.). After polymerization reaction, washed with ion exchanged water, dried, classified with wind force (blowing air), then a colored polymer particle with volume average particle diameter of 8 μm were obtained. Number ratio of the colored polymer particles having particle diameter not larger than 4 μm was 1.3 number %. Further the colored polymer particle was subjected to a surface treatment with a dispersion solution of a resin

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fine particle (a fine particle of fluorinated ethylene propylene copolymer, volume average particle diameter: 2 μm , product of Du Pont - Mitsui Fluorochemicals Co., Ltd.) dispersed sufficiently into a mixture of ethanol / water (volume ratio: 8/2) so that the proportion of the resin fine particle is 2.0 parts by weight per 100 parts by weight of the colored polymer particle. More specifically, the treatment was achieved by immersion method by means of a wet type surface reforming device (trade name: Disper Coat, product of Nissin Engineering Co., Ltd.) so that the resin fine particle adhered locally on the surface of the colored polymer particle. 100 parts of the thus obtained colored polymer particle and 0.3 part of a hydrophobicitized silica particle (trade name: R-974, volume average particle diameter: 12 nm, density: 2.2 g/mL, spherical shaped, product of Nippon Aerosil Co., Ltd.) were mixed at 1,500 rpm for 1 minute with a ~~Henschel mixer~~ HENSCHEL MIXER to obtain a toner with volume average particle diameter of 8 μm . The printing properties and other properties of the obtained toner were evaluated in the same manner as in Example 1. The results are shown in Table 1.